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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,414	04/29/2005	Brent Daniel Rogers	6682-66957-02	4172
46395 7590 08/28/2007 CARGILL, INCORPORATED LAW DEPARTMENT P. O. BOX 5624 MINNEAPOLIS, MN 55440-5624			EXAMINER HENRY, MICHAEL C	
			ART UNIT 1623	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,414	Applicant(s) ROGERS ET AL.	
	Examiner Michael C. Henry	Art Unit 1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-18, 22-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-18, 22-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>06/14/07 & 07/27/07</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

The amendment filed 11/16/07 affects the application, 10/533,414 as follows:

1. Claims 6, 14, 16, 18 have been amended. Claims 1-5, 19-21 have been canceled.

New claims 22-27 have been added.

2. The responsive to applicants' arguments is contained herein below.

Claims 6-18, 22-27 are pending in application

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-18, 22-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6, 8, 10, 13, 14, 16 and 18 recite the phrase "per serving". However, the claim is indefinite because it is unclear what amount or quantity of NAG constitutes a serving.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-9, 18, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Matahira et al. (EP 1075836 A2).

In claim 6, applicant claims a method of preparing a beverage, comprising adding at least about 0.01g NAG per serving to the beverage to form a NAG beverage; and heat pasteurizing the NAG beverage at a temperature of least about 160°F, wherein at least about 70% of the NAG remains in the NAG beverage after the heat pasteurizing. Claims 7-8, 25, are drawn to the method of claim 6 wherein the NAG beverage is heat pasteurized at specific temperature range and wherein the amount of NAG present in the beverage is a specific amount of mg per serving. Claim 9 is drawn to the method of claim 6, wherein the NAG present is derived from a specific source. Claim 18 is drawn to a method of preparing a beverage, comprising: adding at least about 0.01 g NAG per serving to a beverage to form a NAG beverage; and heat pasteurizing the NAG beverage at a temperature of least about 160°F, wherein at least about 0.007g NAG per serving remains in the NAG beverage after heat pasteurizing.

Matahira et al. disclose a method of preparing a beverage (a drink), comprising adding NAG derived from chitin to a beverage to form a NAG beverage (a beverage containing NAG), wherein the NAG beverage comprises at least about 0.01 g NAG (i.e., 1000 mg or 1 g) and wherein the NAG (see page 14, example 10). Matahira et al. disclose that their beverage can be prepared by conventional method (see page 14, example 10).

The difference between applicant's claimed method and the method of Matahira et al. is that Matahira et al. do not heat-pasteurize their beverage. However, it common in the art to pasteurize (heat-pasteurize) a beverage or other food in order to kill undesired microorganisms such as bacteria, viruses, protozoa, molds or yeast that could cause disease, spoilage, or undesired fermentation and to protect the consumer's health (see Shahani et al.'s abstract and

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McFarren et al.'s abstract). In addition, the pasteurization at temperatures of at least 160°F or more (e.g., 250 °F) are also common in the art (see Shahani et al.'s abstract and McFarren et al.'s abstract). This fact is supported by applicant who discloses that heat pasteurization is used to reduce the presence of undesirable microorganisms and disclose high temperatures that are typically used in heat-pasteurization (see page 4, last two paragraphs of applicant's specification).

It would have been obvious to one having ordinary skill in the art, at the time the claimed invention was made to have used the method of Matahira et al. to prepare a beverage comprising NAG and to heat-pasteurize said beverage so as to kill any microorganisms present that could cause disease or spoilage and to protect the consumer's health.

One having ordinary skill in the art would have been motivated, to use the method of Matahira et al. to prepare a beverage comprising NAG and to heat-pasteurize said beverage so as to kill any microorganisms present that could cause disease or spoilage and to protect the consumer's health. It should be noted that the source of the NAG used as recited in claim 9 does render applicant's NAG different from Matshira et al.'s NAG. Furthermore, the use of specific temperature of heat-pasteurizing depends on factors such as the time of heating and the type and amount of microorganisms that may be present in said composition. Also, it should be noted that the amount or quantity that constitutes a serving is not specified by applicant.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22, 23 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Troyano et al. (Journal of Agricultural and Food Chemistry (1996), 44(30, pages 815-817).

Claim 22 is a product-by-process claim wherein the applicants' claims a NAG beverage produced by the method of claim 6. Claim 23 is a product-by-process claim wherein the applicants' claims a NAG beverage produced by the method of claim 18.

Troyano et al. disclose a beverage (milk) comprising: a heat pasteurized NAG beverage (milk), wherein the beverage comprises at least about 4.4 ± 1.42 mg NAG per 100 ml (see Table 1, page 816). Troyano et al. do not explicitly disclose the grams (g) of NAG per serving in their beverage. But, the silence of Troyano et al. does not mean that their composition does not contain the same said grams of NAG per serving. Troyano et al. anticipates the claims if their composition has the same grams of NAG per serving. Troyano et al. renders the claims as being obvious if the grams of NAG per serving in their composition is substantially close to the grams of NAG per serving in applicant's composition. It should be noted that the volume or amount that constitutes a serving is not specified by applicant. A quotation from the MPEP (Manual of Patent Examining Procedure, 8 ed., August 2001) pertaining to Product-by-Process Claims is given below in order for further corroborate the reason for the aforementioned rejection. The

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quotation states that “PRODUCT-BY-PROCESS CLAIMS ARE NOT LIMITED TO THE MANIPULATIONS OF THE RECITED STEPS, ONLY THE STRUCTURE IMPLIED BY THE STEPS “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).” Claims 23 are also encompassed by this rejection.

Claims 10-17, 24, 26, 27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matahira et al. (EP 1075836 A2).

In claim 10, applicant claims a food product comprising: a NAG food product comprising at least about 0.01 g NAG per serving, wherein the NAG food product is at a temperature of at least about 160°F; and an absence of shellfish proteins. Claim 11 is drawn to said food product wherein the food product is as a specific temperature range. Claim 12 is drawn to said food product wherein the food product is a flour- or grain-based product. Claim 13 is drawn to said food product wherein the food product comprises specific mg range of NAG per serving. Claim 24 is a product-by-process claim wherein the applicants’ claim a NAG food product produced by the method of claim 14.

Matahira et al. disclose a food product (cookie) comprising NAG (see page 13, Table 12,). Matahira et al. do not explicitly disclose the grams(g) of NAG per serving in their food product. But, the silence of Matahira et al. does not mean that their composition does not contain the same said grams of NAG per serving. Matahira et al. anticipates the claims if their composition has

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the same grams of NAG per serving. Matahira et al. renders the claims as being obvious if the grams of NAG per serving in their composition is substantially close to the grams of NAG per serving in applicant's composition. It should be noted that the amount or quantity that constitutes a serving is not specified by applicant either. Claims 11, 12 and 24 are also encompassed by this rejection since Matahira et al. silence with respect to the temperature of the food product does not mean that their composition does not have the same temperature as applicant's composition, and since Matahira et al.'s food product is also a flour-based product (see page 13, Table 11). Furthermore, it should be noted that a quotation from the MPEP (Manual of Patent Examining Procedure, 8 ed., August 2001) pertaining to Product-by-Process Claims is given below in order for further corroborate the reason for the aforementioned rejection pertaining to claim 24. The quotation states that "PRODUCT-BY-PROCESS CLAIMS ARE NOT LIMITED TO THE MANIPULATIONS OF THE RECITED STEPS, ONLY THE STRUCTURE IMPLIED BY THE STEPS "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)."

In claim 14, applicant claims a method of preparing a food product, comprising providing a food product; adding a first amount of NAG derived from fungal biomass containing chitin to the food product to form a NAG food product, wherein the NAG food product comprises at least about 0.01 g NAG per serving; and heating the NAG food product to a

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temperature of at least about 160°F. Claims 15-17 are drawn to the method of claim 14 wherein heating involves baking, broiling or boiling, wherein the first amount of NAG present in the food product is a specific amount of grams per serving, wherein the food product is heated at to at least a specific temperature. Claim 26 and 27 are drawn to the method of claim 14 wherein the NAG present is derived from a specific source and wherein specific amount of NAG remains after heating.

Matahira et al. disclose a method of preparing a food product (a cookie), comprising adding NAG derived from chitin to a food product to form a NAG food product (a product containing NAG), wherein the NAG food product comprises at least about 0.01 g NAG (i.e., 80 g) and wherein the NAG food product is heated (see page, 13, example 7). Matahira et al. disclose that their product is prepared by a conventional method (see page, 13, example 7). Matahira et al. do not explicitly disclose the grams (g) of NAG per serving in their food product nor the temperature of heating. But, the silence of Matahira et al. does not mean that their composition does not contain the same said grams of NAG per serving and were not heated at the same said temperature. It should be noted that applicant claims does not specify or recite the amount or quantity that equals a serving and that since Matahira et al.'s NAG food composition is a cookie then the said composition must have been heated at a temperature of at least 160°F by baking. Matahira et al. anticipates the claims if their composition has the same grams of NAG per serving and is heated at the same temperature. Matahira et al. renders the claims as being obvious if the grams of NAG per serving and the temperature of heating of their composition is substantially close to the grams of NAG per serving and the temperature of heating of applicant's composition. It should be noted that the amount or quantity that constitutes a serving is not

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specified by applicant. It should be noted that claims 26 and 27 are also encompassed by this rejection since amount source of the NAG does not limit further limit the composition claimed and the silence of Matahira et al. with respect to the amount NAG remaining does not mean that Matahira et al.'s composition does not contain the same said amount.

Response to Arguments

Applicant's arguments with respect to claims 6-18, 22-27 have been considered but are not found convincing.

The applicant argues that a serving is an amount a human or animal would customarily eat at one time. Therefore, the amount of food or beverage (for example a particular number of grams or mls) in a serving ("per serving") will depend on the particular food or beverage. However, the claims specify the minimum amount of NAG in each serving, and therefore, the amount of NAG in each serving is clear. On the contrary however, the amount that one would customarily eat is not a fixed amount or quantity and depends on factors such as the type individual, the physical condition or health of the individual, the age and appetite of the individual and whether or not said individual is hungry. That is, there is no metes and bounds or limits in terms of concentration of NAG required in said beverage. Moreover, it is unclear what amount or quantity of NAG constitutes a serving

The applicant argues that the addition of such NAG to a food product disclosed in Matahira et al. will result in shellfish proteins in the resulting NAG-containing food product. However, Matahira et al. does not disclose that their food product contains shellfish proteins.

The applicant argues that claims 14-17 are novel and non-obvious in view of the Matahira et al. document. Claim 14 now specifies an amount of NAG present in the food

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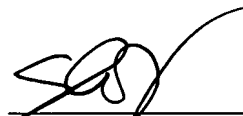
product after heating. Matahira et al. does not teach or suggest any amount of NAG that will be present after heating to at least 160°C. However, a composition wherein at least about 70% of the NAG remains after heating also reads on a composition wherein 100% of NAG remains after heating, and Matahira et al. does disclose that the % of NAG decreases after heating.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Henry whose telephone number is 571-272-0652. The examiner can normally be reached on 8.30am-5pm; Mon-Fri. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia A. Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Henry

 8/20/07
Shaojia Anna Jiang, Ph.D.
Supervisory Patent Examiner
Art Unit 1623

August 19, 2007.